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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,803	09/30/2003	Tong Zhang	BP2867	2230
34399	7590	03/23/2006	EXAMINER	
GARLICK HARRISON & MARKISON LLP P.O. BOX 160727 AUSTIN, TX 78716-0727			YANCHUS III, PAUL B	
			ART UNIT	PAPER NUMBER
			2116	
DATE MAILED: 03/23/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/675,803

Applicant(s)

ZHANG ET AL.

Examiner

Paul B. Yanchus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/11/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11, 13-16, 18-21 and 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Milios et al., US Patent Application Publication no. 2002/0077764 [Milios]¹.

Regarding claim 1, Milios discloses a host-side wireless interface that services communications between a wireless user input device and a serviced host, the host-side wireless interface comprising:

a wireless network interface that wirelessly communicates with the wireless user input device [RF interface, paragraph 0027 and element 56 in Figure 5];

a host interface communicatively coupled to the wireless interface and to the serviced host [wireless driver, USB and boot BIOS interface, paragraphs 0027-0029 and elements 48, 34 and 57 in Figure 5];

wherein when the serviced host initiates bootstrap operations via a Basic Input/Output System (BIOS), the host interface operates in a BIOS host interface mode to allow input from the wireless user input device to the BIOS during the bootstrap operations [alternative handling of human interface data, paragraphs 0028 and 0029]; and

¹ cited in 7/11/05 IDS.

wherein when the serviced host initiates Operating System (OS) operations, the host interface operates in an OS host interface mode, wherein the OS host interface mode differs from the BIOS host interface mode [data path between RF interface and wireless driver is used, paragraph 0027].

Regarding claim 2, Milios further discloses:

during both the initiation of the bootstrap operations and the initiation of the OS operations, the host interface firstly presents to the serviced host an interface configuration corresponding to the OS host interface mode and secondly presents to the serviced host an interface configuration corresponding to the BIOS host interface mode [data path between RF interface and wireless driver is used by default unless a condition triggers the alternative handling of the data, paragraphs 0027 and 0029];

during the bootstrap operations, the BIOS does not recognize the configuration corresponding to the OS host interface mode but does recognize the configuration corresponding to the BIOS host interface mode [because BIOS does not have a wireless driver, alternative handling of data is used, paragraph 0029];

the OS recognizes both the configuration corresponding to the OS host interface mode and the configuration corresponding to the BIOS host interface mode [paragraphs 0027 and 0028]; and

the OS selects the firstly presented configuration corresponding to the OS host interface mode [data path between RF interface and wireless driver is used by default unless a condition triggers the alternative handling of the data, paragraphs 0027 and 0029].

Regarding claim 3, Milios further discloses that the configuration corresponding to the BIOS host interface mode comprises a Universal Serial Bus (USB) Human Interface Device (HID) configuration [paragraphs 0028 and 0029] and the configuration corresponding to the OS host interface mode comprises a Bluetooth HID configuration [paragraphs 0023 and 0027].

Regarding claim 4, Milios further discloses that the BIOS is not Bluetooth aware and does not recognize the Bluetooth HID configuration [paragraphs 0028 and 0029] and the OS is Bluetooth aware and recognizes the Bluetooth HID configuration [paragraphs 0023 and 0027].

Regarding claim 5, Milios further discloses that the host interface comprises:

a hub that operably couples to the serviced host via a host interface bus [USB, paragraphs 0028 and 0029 and element 34 in Figure 5];

a BIOS host interface module operably coupled to the hub that supports the BIOS host interface mode [boot BIOS interface, paragraphs 0028-0029 and element 57 in Figure 5]; and

an OS host interface module operably coupled to the hub that supports the OS host interface mode [wireless driver, paragraph 0027 and element 48 in Figure 5].

Regarding claim 6, Milios further discloses that the bootstrap operations of the serviced host, the BIOS recognizes the BIOS host interface module but does not recognize the OS host interface module [BIOS does not recognize the wireless driver, paragraph 0029].

Regarding claim 7, Milios further discloses that the OS operations of the serviced host, the OS selects the OS host interface module for servicing [paragraph 0027].

Regarding claim 8, Milios further discloses that the BIOS host interface module supports a Universal Serial Bus (USB) Human Interface Device (HID) configuration [paragraphs 0028

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and 0029] and the OS host interface module supports a Bluetooth HID configuration [paragraphs 0023 and 0027].

Regarding claim 9, Milios further discloses that the wireless network interface wirelessly communicates with the wireless user input device according to at least one version of the Bluetooth operating standard [paragraphs 0023 and 0027].

Regarding claim 10, Milios further discloses a microprocessor unit operably coupled to the wireless network interface and to the host interface [element 26 in Figure 5].

Regarding claim 11, Milios further discloses that the wireless user input device is selected from the group consisting of at least a wireless keyboard and a wireless mouse [paragraph 0027].

Regarding claim 13, Milios discloses a computer peripheral adapter that services communications between a wireless user input device and a serviced host computer, the computer peripheral adapter comprising:

a bus coupler that couples the computer peripheral adapter to a peripheral bus of the serviced computer [USB, paragraphs 0028-0029 and element 34 in Figure 5];

a wireless network interface that wirelessly communicates with the wireless user input device [RF interface, paragraph 0027 and element 56 in Figure 5];

a host interface communicatively coupled to the bus coupler and to the wireless interface [wireless driver and boot BIOS interface, paragraphs 0027-0029 and elements 48 and 57 in Figure 5];

wherein when the serviced host computer initiates bootstrap operations via a Basic Input/Output System (BIOS), the host interface operates in a BIOS host interface mode to allow

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input from the wireless user input device to the BIOS during the bootstrap operations [alternative handling of human interface data, paragraphs 0028 and 0029]; and

wherein when the serviced host computer initiates Operating System (OS) operations, the host interface operates in an OS host interface mode to allow input from the wireless user input device to the OS [data path between RF interface and wireless driver is used, paragraph 0027],

wherein the OS host interface mode differs from the BIOS host interface mode [paragraphs 0027-0029].

Regarding claim 14, Milios further discloses:

during both the initiation of the bootstrap operations and the initiation of the OS operations, the host interface firstly presents to the serviced host an interface configuration corresponding to the OS host interface mode and secondly presents to the serviced host an interface configuration corresponding to the BIOS host interface mode [data path between RF interface and wireless driver is used by default unless a condition triggers the alternative handling of the data, paragraphs 0027 and 0029];

during the bootstrap operations, the BIOS does not recognize the configuration corresponding to the OS host interface mode but does recognize the configuration corresponding to the BIOS host interface mode [because BIOS does not have a wireless driver, alternative handling of data is used, paragraph 0029];

the OS recognizes both the configuration corresponding to the OS host interface mode and the configuration corresponding to the BIOS host interface mode [paragraphs 0027 and 0028]; and

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the OS selects the firstly presented configuration corresponding to the OS host interface mode [data path between RF interface and wireless driver is used by default unless a condition triggers the alternative handling of the data, paragraphs 0027 and 0029].

Regarding claim 15, Milios further discloses that the configuration corresponding to the BIOS host interface mode comprises a Universal Serial Bus (USB) Human Interface Device (HID) configuration [paragraphs 0028 and 0029] and the configuration corresponding to the OS host interface mode comprises a Bluetooth HID configuration [paragraphs 0023 and 0027].

Regarding claim 16, Milios further discloses that the BIOS is not Bluetooth aware and does not recognize the Bluetooth HID configuration [paragraphs 0028 and 0029] and the OS is Bluetooth aware and recognizes the Bluetooth HID configuration [paragraphs 0023 and 0027].

Regarding claim 18, Milios discloses a computer peripheral adapter that services communications between a wireless user input device and a serviced host computer, the computer peripheral adapter comprising:

- a bus coupler that couples the computer peripheral adapter to a peripheral bus of the serviced computer [USB, paragraphs 0028-0029 and element 34 in Figure 5];

- a wireless network interface that wirelessly communicates with the wireless user input device [RF interface, paragraph 0027 and element 56 in Figure 5];

- a host interface communicatively coupled to the bus coupler and to the wireless interface that includes:

 - a hub that operably couples to the serviced host via a host interface bus [USB, paragraphs 0028 and 0029 and element 34 in Figure 5];

a BIOS host interface module operably coupled to the hub that supports the BIOS host interface mode [boot BIOS interface, paragraphs 0028-0029 and element 57 in Figure 5]; and
an OS host interface module operably coupled to the hub that supports the OS host interface mode [wireless driver, paragraph 0027 and element 48 in Figure 5].

wherein when the serviced host computer initiates bootstrap operations via a BIOS, the serviced host computer accesses the BIOS host interface operations of the BIOS host interface module [alternative handling of human interface data, paragraphs 0028 and 0029]; and

wherein when the serviced host computer initiates OS operations, the serviced host computer accesses the OS host interface host operations of the OS host interface module [data path between RF interface and wireless driver is used, paragraph 0027].

Regarding claim 19, Milios further discloses that in the bootstrap operations of the serviced host, the BIOS recognizes the BIOS host interface module but does not recognize the OS host interface module [BIOS does not recognize the wireless driver, paragraph 0029].

Regarding claim 20, Milios further discloses that in the OS operations of the serviced host, the OS selects the OS host interface module for servicing [data path between RF interface and wireless driver is used, paragraph 0027].

Regarding claim 21, Milios further discloses that the BIOS host interface module supports a Universal Serial Bus (USB) Human Interface Device (HID) configuration [paragraphs 0028 and 0029] and the OS host interface module supports a Bluetooth HID configuration [paragraphs 0023 and 0027].

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Regarding claim 23, Milios discloses a method for operating a host-side wireless interface that is operably coupled to a serviced host computer to support communications from a wireless user input device to the serviced host computer, the method comprising:

during a first operation, interfacing with a Basic Input/Output System (BIOS) of the serviced host computer while the serviced host computer is performing bootstrap operations, wherein interfacing with the BIOS of the serviced host computer includes operating the host-side wireless interface in a BIOS host interface mode to allow input from the wireless user input device to the BIOS during the bootstrap operations [alternative handling of human interface data, paragraphs 0028 and 0029]; and

during a second operation, interfacing with an Operating System (OS) of the serviced host computer, wherein interfacing with the OS of the serviced host computer includes operating the host-side wireless interface in an OS host interface mode to allow input from the wireless user input device to the OS, wherein the OS host interface mode differs from the BIOS host interface mode [data path between RF interface and wireless driver is used, paragraph 0027].

Regarding claim 24, Milios further discloses:

firstly presenting a configuration corresponding to the OS host interface mode and secondly presenting a configuration corresponding to the BIOS host interface mode [data path between RF interface and wireless driver is used by default unless a condition triggers the alternative handling of the data, paragraphs 0027 and 0029];

the BIOS recognizing the configuration corresponding to the BIOS host interface mode but not recognizing the configuration corresponding to the OS host interface mode [BIOS does not have a wireless driver, paragraph 0029];

the OS recognizing both the configuration corresponding to the OS host interface mode and the configuration corresponding to the BIOS host interface mode [paragraphs 0027 and 0028]; and

the OS selecting the firstly presented configuration corresponding to the OS host interface mode [data path between RF interface and wireless driver is used by default unless a condition triggers the alternative handling of the data, paragraphs 0027 and 0029].

Regarding claim 25, Milios further discloses that the configuration corresponding to the BIOS host interface mode comprises a Universal Serial Bus (USB) Human Interface Device (HID) configuration [paragraphs 0028 and 0029] and the configuration corresponding to the OS host interface mode comprises a Bluetooth HID configuration [paragraphs 0023 and 0027].

Regarding claim 26, Milios further discloses that the BIOS is not Bluetooth aware and does not recognize the Bluetooth HID configuration [paragraphs 0028 and 0029] and the OS is Bluetooth aware and recognizes the Bluetooth HID configuration [paragraphs 0023 and 0027].

Regarding claim 27, Milios further discloses that the wireless network interface wirelessly communicates with the wireless user input device according to at least one version of the Bluetooth operating standard [paragraphs 0023 and 0027].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12, 17, 22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milios et al., US Patent Application Publication no. 2002/0077764 [Milios]².

Milios, as described above, discloses a host-side wireless interface and computer peripheral adapter that services communications between a wireless user input device and a serviced host. It is inherent that configuration information for the wireless user input device must be stored somewhere in the host-side wireless interface. Milios is silent as to how the wireless user input device configuration information is stored. The examiner takes official notice that it is well known in the art to store configuration information on non-volatile memory. One would be motivated to use non-volatile memory in order to preserve the configuration information when the interface is powered off.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hulvey, US Patent Application Publication no. 2003/0197677, discloses a wireless interface for enabling communications between a wirelessly enabled host and user input device.

Kuo et al., US Patent no. 6,941,114, discloses a USB based wireless transmitting/receiving system.

² cited in 7/11/05 IDS.

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Chidester, US Patent no. 5,946,469, discloses a peripheral device emulator capable of emulating a peripheral to allow the peripheral to function normally despite not being initialized at the time of system startup.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul B. Yanchus whose telephone number is (571) 272-3678. The examiner can normally be reached on Mon-Thurs 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Paul Yanchus
March 13, 2006


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